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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/481,451	01/11/00	FAHS	K 115/434

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BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO IL 60610

EXAMINER	
NGUYEN, T	
ART UNIT	PAPER NUMBER
1722	9

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/481,451	FAHS ET AL.	
	Examiner	Art Unit	
	Thu Khanh T. Nguyen	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said inlet" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites a manifold comprising "*said casting line positioned down stream of said manifold*" which is unclear whether the casting line is part of the manifold or not. Should the casting line is part of the casting apparatus rather than the manifold? Clarification and correction are required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (4,790,242) in view of the Japanese reference (59,133) and Skovhage et al (4,976,981).

Driessen discloses an apparatus and method for casting cheese, comprising a removable discharge manifold (Fig. 4, 11, 12, col. 2, lines 1-2), wherein the manifold having a hollow interior chamber (Fig. 5) with many inlets (49) for receiving starting material (65), a discharge opening (15, open bottom of chamber 12), an endless casting belt (61, 68, 72) mounted down stream to the manifold wherein the cheese sheet is cooled on the belt surface (col. 2, lines 23-26), a thickness control bar (18) is mounted at one side of the chamber (12) for controlling the thickness of the web material, a belt driven mechanism (71, 69) for revolving the belt. The manifold chamber includes a top, bottom, end, upstream and downstream face plates (11, 12), wherein the bottom face open to the casting belt, the downstream face open to the control bar, and the top face having inlets (Fig. 12); each inlets is attached to a corresponding adjustable valve (52), and wherein the control bar (18) is set a fixed distance from the casting belt (61) and a space is formed between a surface of the control bar (18) for determine the thickness of the web material. However, Driessen fails to disclose a pump for moving the cheese along the processing line and a roller being mounted at the downstream face of the manifold chamber.

Skovhage et al discloses an apparatus for preparing cheese curd blocks comprising a pump (Fig. 1, 6) for transfer cheese from a storage hopper (1) to a processing vat (7).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified Driessen by providing cheese-sheet forming apparatus with a pump as taught by Skovhage et al, because the pump facilitates cheese-transferring from the storage hopper to the processing site.

The Japanese reference discloses a method and apparatus for forming a dough web material, comprising an endless casting belt (14), a rotatable press roller (7) mounted to the

downstream face of the manifold (1) and being driven by a shaft in the same direction as the belt for the purpose of facilitating the material onto the casting belt.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have replaced Driessen's control bar with a rotatable press roller in order to facilitate the movement of the material from the manifold onto the casting belt as taught by the Japanese reference.

5. Claims 7 and 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (4,790,242) in view of Japanese reference (59,133).

Driessen discloses an apparatus and method for casting cheese, comprising a removable discharge manifold (11, 12, col. 2, lines 1-2), wherein the manifold having a hollow interior chamber (Fig. 5) with many inlets (49) for receiving starting material (65), a discharge opening (15, open bottom of chamber 12), an endless casting belt (61, 68, 72) mounted downstream to the manifold wherein cheese sheet is cooled on the belt surface (col. 2, lines 23-26), a thickness control bar (18) is mounted at one side of the chamber (12) for controlling the thickness of the web material, a belt driven mechanism (71, 69) for revolving the belt. The manifold chamber includes a top, bottom, end, upstream and downstream face plates (11, 12), wherein the bottom face open to the casting belt, the downstream face open to the control bar, and the top face having inlets (Fig. 12); each inlets is attached to a corresponding adjustable valve (52), and wherein the control bar (18) is set a fixed distance from the casting belt (61) and a space is formed between a surface of the control bar (18) for determine the thickness of the web material.

However, Driessen fails to disclose a roller being mounted at the downstream face of the manifold chamber.

The Japanese reference discloses a method and apparatus for forming a dough web material, comprising an endless casting belt (14), a rotatable press roller (7) mounted to the downstream face of the manifold (1) and being driven by a shaft in the same direction as the belt for the purpose of facilitating the material onto the casting belt.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have replaced Driessen's control bar with a rotatable press roller in order to facilitate the movement of the material from the manifold onto the casting belt as taught by the Japanese reference.

6. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (4,790,242) in view of Japanese reference (59,133) as applied to claims 1 and 7 above, and further in view of Collins (4,815,370).

Driessen and the Japanese reference disclose an apparatus and method for forming a dough web as described above. However, these references fail to disclose the roller is made of steel and having a plastic sleeve.

Collins discloses a rice pressing apparatus in which a press roller can be made of steel having a rubber sleeve in order to smooth the web material surface and to be able to change the sleeve as it worn out without replacing the roller.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified Driessen and the Japanese reference with a roller made of

steel with a plastic sleeve for the purpose of smoothing the web surface and being able to change the sleeve as it worn out without replacing the roller as taught by Collins. It is in the scope of an artisan to recognize that stainless steel is a better choice for making a mold or a press roller.

Response to Arguments

7. Applicant's arguments filed April 30, 2001 have been fully considered but they are not persuasive.

The applicants have repeatedly argued that the Japanese reference is nonanalogous art and the combination of Driessen and the Japanese reference is improper. The examiner respectfully disagrees for the following reasons:

First of all, in the specification of the applicants' invention, page 1, line 12 cites "*[t]he present invention is directed to a method and apparatus for forming a continuous sheet of a molten material with particularly viscous, sticky properties. This molten material may be moldable, plasticized or a food product such as cheese.*" It is clear that the current invention is not limited to an apparatus for processing cheese but any material that moldable, plasticized or a food product that can be formed in a continuous sheet. It is obvious to an artisan to recognize that dough is moldable into a sheet such as pizza crusts.

Secondly, the Applicants argued that "*the used of an auger to push the material toward the roller, as in the Japanese reference, would not work on molten cheese. The used of an auger in Applicant's invention would cut through the molten material and thus it would not provide the required pressure needed to extrude the material out of the manifold toward the roller... The Japanese reference discloses a driven roller but does not disclose a driven belt.*" The examiner

again respectfully disagrees. The roller is used to press the dough from the hopper into sheet, wherein the sheet is conveyed out by a casting belt 14 as clearly shown in Figure 1 and 2. Instead of letting the material falling to the press roller by gravity, an auger was used to facilitate the transferring of the material to the hopper. The used of an auger inside a cheese hopper to push the material toward an outlet to form a cheese layer has been used in the art, as shown in Lindgren reference (5,480,666).

Thirdly, in regarding to Applicants' argument that the Japanese reference does not disclose a roller to form a smooth surface for the sheet product and does not disclose a casting line to cool the product after being formed. However, a roller to form a sheet with a smooth surface is not in the scope of the claims. This is a piecemeal analysis of reference. In the primary reference, Driessen has disclosed an process of making a sheet of cheese, wherein the cheese being pressed on to a casting belt which transfers the sheet product out of the processing site, and the cheese sheet is cooled as being displaced on the belt surface. The Japanese reference shows a roller can be used in place of a bar to press the material into a sheet form and to control the thickness of the sheet product. Further the Japanese reference discloses a casting belt 14 to carry out the sheet product and when the sheet product is exposed to the atmosphere it will be cooled. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to Applicants' argument regarding to claims 2 and 8 that Collins fails to disclose a roller sleeve made of a non-stick material, such as polypropylene, so that the roller

surface does not stick to the molten, viscous material and facilitate the distribution of material in a continuous sheet, the examiner would like to point out that these arguments are not in commensurate with the scope of the claims. Furthermore, it is well known in the art to use non-stick material layer in a molding apparatus such as Teflon to prevent sticking and provide a smooth surface.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 703-305-7167. The examiner can normally be reached on Monday-Thursday and on alternate Friday, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 703-308-3322. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9673 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

TN
June 7, 2001

NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700